REMARKS

Applicants note that the foregoing amendment has been made to place the application in better form. This amendment was not made to overcome a patentability rejection and therefore should not create a bar to any later determination of a range of equivalents. No new matter has been added. Favorable consideration is respectfully requested.

Respectfully submitted,

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Appendix (Version Showing Changes to Original Claims)

26. (amended) A temperature control system for controlling a temperature of a substrate in an atomic layer deposition system, said temperature control system comprising:

a deposition chamber;

a vacuum pump coupled to said deposition chamber;

a substrate holder located within said deposition chamber, said substrate holder having a passageway for flowing a backside gas into a space between said substrate holder and said substrate on said substrate holder;

a gas inlet coupled to said deposition chamber; and

an energy source for heating by irradiation said substrate on said substrate holder.

27. (amended) The temperature control system of claim 26, further comprising a means for valving and controlling a pressure of said backside gas.

28. (amended) The temperature control system of claim 26, wherein said substrate holder is an electrostatic chuck.

29. (amended) The temperature control system of claim 28, wherein said electrostatic chuck has a means for flowing a fluid therein.

30. (amended) The temperature control system of claim 29, wherein said electrostatic chuck has a cooling capacity of between about 200 W/m^2 °K and 350 W/m^2 °K.

31. (amended) The temperature control system of claim 29, wherein said electrostatic chuck has a cooling capacity of at least 200 W/m^2 °K.

32. (amended) The temperature control system of claim 28, wherein there is a space between said substrate and said electrostatic chuck.

33. (amended) The temperature control system of claim 26, wherein said energy source for heating said substrate is a rapid thermal processor.

34. (amended) The temperature control system of claim 33, wherein said substrate is heated with a temperature ramp rate of about between 100 °C per second and 300 °C per second.

35. (amended) The temperature control system of claim 33, wherein said substrate is heated with a temperature ramp rate of at least 100 °C per second.

36. (amended) The temperature control system of claim 33, wherein a source for said rapid thermal processor is a graphite heater.

37. (amended) The temperature control system of claim 33, wherein a source for said rapid thermal processor is a plasma arc.

38. (amended) The temperature control system of claim 33, wherein a source for said rapid thermal processor is at least one tungsten halogen lamp.

39. (amended) The temperature control system of claim 26, wherein said energy source is selected from the group consisting of a laser, an electron beam source, and an x-ray source.

40. (amended) The temperature control system of claim 39, wherein said substrate is heated with a temperature ramp rate of about between 200 °C per second and 700 °C per second.

41. (amended) The temperature control system of claim 39, wherein said substrate is heated with a temperature ramp rate of at least 200 °C per second.

42. (amended) The temperature control system of claim 39, further comprising a means for scanning an output of said energy source over a surface of said substrate.

43. (amended) The temperature control system of claim 39, further comprising a means for scanning said substrate relative to an output of said energy source.